

# **EXHIBIT 2**

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

- - - - -x  
WAYMO, LLC, :  
Plaintiff, :  
v. : Case No.  
UBER TECHNOLOGIES, : 3:17-cv-00939-WHA  
INC., OTTOMOTTO, LLC, :  
and OTTO TRUCKING, :  
INC., :  
Defendants. :

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Videotaped Deposition of PHILIP HOBBS,  
taken at 777 Sixth Street, Northwest,  
11th Floor, Washington, D.C. 20001-3706,  
commencing at 9:42 a.m., Friday, August 18,  
2017, before Christina S. Hotsko, RPR,  
a Notary Public in and for the District of  
Columbia.

JOB No. 2680864

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1 description.

2 Q. But again, you agree that all physical  
3 diodes in the real world will exhibit leakage  
4 current?

5 A. Under certain operating conditions. 11:44:55

6 Q. Okay. So there are no physical diodes in  
7 the real world that will allow current flow in one  
8 direction only, period?

9 A. Well, you have to discuss it in the  
10 context of the circuit. Because, for instance, if 11:45:12  
11 you -- if the diode is never reverse-biased --

12 Q. Then leakage current doesn't come into  
13 play.

14 A. Then you won't have any leakage current.

15 Q. So a diode doesn't always have to be --  
16 its reverse-bias property doesn't always have to  
17 be used?

18 COURT REPORTER: Sorry. Could you just  
19 slow down?

20 MR. NEWTON: Sorry.

21 BY MR. NEWTON:

22 Q. I think what you just said or what you  
23 just suggested is that the reverse-bias property  
24 of the diode does not always have to be used.

25 A. That's right. 11:45:39

1 Q. There's applications where a diode might  
2 just be used to send current one direction --

3 A. Yes.

4 Q. -- and the reverse-bias feature doesn't  
5 come into play? 11:45:48

6 A. That's correct.

7 Q. Okay. So then let me try to phrase it in  
8 terms of what the diode is capable of doing. Any  
9 real-world physical diode will be capable of  
10 allowing leakage current in its reverse-bias 11:45:58  
11 state, correct?

12 A. Yes. That's right.

13 Q. Okay. So there's no real-world diodes  
14 that will allow the flow of current in one  
15 direction only; they're all going to allow it in 11:46:12  
16 both directions.

17 A. Well, I mean, it depends what you mean by  
18 allow. The --

19 Q. I'm just using Uber's definition.

20 A. Well, I understand that. But it -- the 11:46:21  
21 thing is that when you say allow," -- and the  
22 reason why I don't like Dr. Wolfe's  
23 construction is that he says much more easily.  
24 And the -- just a moment. And the -- whereas I  
25 think that that is -- I think that is far more 11:46:38

1 so that the -- so that the diode doesn't do  
2 anything, then you could certainly put -- choose  
3 components where that wouldn't be the case.

4 Q. Then at line 62 it says, "Upon the diode  
5 being reverse biased, the current through the 14:18:16  
6 diode [sic] 510 goes to zero, the voltage across  
7 the inductor 510 settles at zero, which sets node  
8 A to the voltage of the voltage source 502 (e.g.  
9 the voltage V1), but the capacitor may hold a  
10 higher voltage (e.g. about 2 V1)." 14:18:37

11 A. Yes.

12 Q. And again, that's using permissive  
13 language; it says it may hold a higher voltage  
14 than the voltage source.

15 A. Yes, it does. 14:18:49

16 Q. And if you go to column 19, line 26  
17 through 27.

18 A. Okay.

19 Q. Again, it says, "The charge on the  
20 capacitor 516 may exceed the voltage V1 of the 14:19:09  
21 voltage source 502."

22 Do you see that?

23 A. I do.

24 Q. So again, it's saying that the charge on  
25 the capacitor may exceed the maximum voltage of 14:19:21

1 the voltage source, but it doesn't have to?

2 A. Yes. I imagine they mean the voltage on  
3 the capacitor.

4 Q. Instead of the charge on the capacitor?

5 A. Yes. 14:19:32

6 Q. Then line 31 of column 19 says, "For  
7 example, the capacitor 516 may be initially  
8 charged to a voltage level of about 2 V1."

9 So again, there, it's using permissive  
10 language to say that it may be charged above the 14:19:59  
11 voltage of the voltage source.

12 A. That's right. I mean, permissive  
13 language is another one of those lawyerisms that I  
14 wouldn't want to set my name to the full legal  
15 dictionary definition. But from a technical guy's 14:20:16  
16 point of view, that's true.

17 Q. Jumping to column 21 --

18 A. Yep.

19 Q. It says, "In some examples, the  
20 voltage" -- I'm sorry, column 21, line 3. It 14:20:35  
21 says, "In some examples, the voltage at which the  
22 two voltages are approximately equal so as to  
23 terminate the charging cycle occurs for a voltage  
24 of about 2 V1."

25 A. Yes. 14:20:50

1 Q. So there it's saying in examples of the  
2 invention, the voltage on the capacitor can be  
3 2 V1?

4 A. Yes. We've discussed cases where it  
5 could be more or less, depending on what you do 14:21:00  
6 with the switch.

7 Q. So you agree those are just examples;  
8 it's not a requirement to charge it up to 2 V1?

9 A. Not the exact value, no.

10 Q. I had a question I wanted to go back to 14:21:12  
11 about something we were discussing earlier in the  
12 context of your LiDAR project. And I think there  
13 was a distinction you were making between pulsed  
14 operation and continuous operation.

15 A. Yes. 14:22:21

16 Q. Is -- was that in the context of the  
17 coherent LiDAR that you were looking at?

18 A. That's right. You can do coherent pulsed  
19 LiDAR, but CW is more common.

20 Q. Okay. CW is continuous -- 14:22:37

21 A. Continuous wave, yeah.

22 Q. -- wave?

23 A. In other words, you leave the laser  
24 turned on all the time.

25 Q. Okay. What is the laser in that example? 14:22:40